

be possible that the evaluation values of the user's feeling deduced in each system contradict each other. Hereinafter, evaluation value update processing regarding the "joy" index when the user gets a home run in the baseball game will be described.

[0036] The third feeling deduction unit **106** holds an evaluation value table for deducing feeling as "positive" in a case in which the user gets a home run and as "negative" in a case in which the user gives up a home run. Upon receiving the event notification that the user has got a home run from the event detection unit **40**, the third feeling deduction unit **106** deduces the evaluation value of the "joy" index as "positive" with reference to the evaluation value table.

[0037] Usually, when the user gets a home run, the user expresses feeling of the joy such as moving the body and chattering or saying, "I did it. I've got a home run." At this time, the first feeling deduction unit **102** and the second feeling deduction unit **104** both deduce the evaluation value of the "joy" index as "positive." Therefore, the evaluation values of the "joy" index provided to the internal state management unit **110** from the feeling deduction unit **100** via the three systems are all "positive," and the internal state management unit **110** updates the evaluation value of the "joy" index in the user internal state storage unit **134** to "positive."

[0038] However, in a case in which the user is aiming for anything other than a home run, the user may not always express the speech and action of joy. For example, when the user is aiming for a triple hit in order to establish a cycle hit (one batter will get an one-base hit, a two-base hit, a three-base hit, and a home run in one game), the user may not be pleased even if the user get a home run. In the game, besides winning and losing, there are also provided rules for commending a special play such as a cycle hit, in many cases. Accordingly, a user who is aiming for awards may be happier with a three-base hit than a home run. Thus, when the user who got a home run speaks "Oops. I've got a home run" dispiritedly, the first feeling deduction unit **102** and the second feeling deduction unit **104** both deduce the evaluation value of the "joy" index as "negative."

[0039] Therefore, the internal state management unit **110** is provided with the "negative" evaluation value from the first feeling deduction unit **102** and the second feeling deduction unit **104**, and the "positive" evaluation value from the third feeling deduction unit **106**. The internal state management unit **110** may adopt an evaluation value that matches with half or more of the evaluation values being provided from the three systems. That is, the internal state management unit **110** may adopt an evaluation value that matches with half or more of the evaluation values being independently provided from a plurality of systems, according to a majority rule. Therefore, in this case, the evaluation value of the "joy" index may be updated to "negative."

[0040] Note that the internal state management unit **110** may set priorities to the evaluation values provided from the three systems, and may determine the evaluation value to be adopted according to the priorities. The ranking of each evaluation value will be described below. First, the evaluation value deduced by the third feeling deduction unit **106** is a unique evaluation value defined for the event, and does not reflect the actual state of the user. Therefore, the evaluation value deduced by the third feeling deduction unit **106** may be set to the lowest priority to be adopted.

[0041] Next, when the first feeling deduction unit **102** and the second feeling deduction unit **104** are compared, the second feeling deduction unit **104** deduces feeling on the basis of only the contents of the user's speech, and there is an aspect that an amount of information for the deduction is small. In addition, even if the contents of the speech themselves are positive contents, the user may speak self-abusively, in some cases. For example, there are some cases where although the user was aiming for a three-base hit, the user speaks "I've got a home run" dropping the user's shoulder dispiritedly. In this case, the second feeling deduction unit **104** deduces the "positive" evaluation value, but the first feeling deduction unit **102** deduces the "negative" evaluation value from the user's attitude or the paralinguistic information. As described above, since the user may speak a word contrary to emotion, the internal state management unit **110** may set reliability of the evaluation value by the first feeling deduction unit **102** higher than reliability of the evaluation value by the second feeling deduction unit **104**. Therefore, the internal state management unit **110** may set the priority in the order of the evaluation values according to the first feeling deduction unit **102**, the second feeling deduction unit **104**, and the third feeling deduction unit **106**.

[0042] The internal state management unit **110** may update the internal state of the user by setting the priority if the evaluation value may be obtained by at least one system. In a case in which the user's feeling deduced by the first feeling deduction unit **102** does not match with the user's feeling deduced by the second feeling deduction unit **104**, the internal state management unit **110** updates the internal state of the user on the basis of the user's feeling deduced by the first feeling deduction unit **102** according to the priority. Also, for example, when the user gets a home run, in a case in which the first feeling deduction unit **102** and the second feeling deduction unit **104** may not deduce the positive or negative user's feeling (in a case in which the user neither moves nor speaks at all), it is sufficient that the internal state management unit **110** adopts the evaluation value deduced by the third feeling deduction unit **106**.

[0043] The user's "popularity rating" for the robot **20** is derived from a plurality of the evaluation values of the feeling deduced from the speech and action performed by the user on the robot **20** up until the present time. A name of the robot **20** is assumed to be "Hikoemon" in the following description. When the robot **20** speaks to the user, if the user responds as "Hikoemon, that's exactly what you say," the feeling deduction unit **100** deduces that the evaluation value of the user's "love" index is "positive," whereas if the user responds as "Hikoemon, you're noisy, be quiet," the feeling deduction unit **100** deduces that the evaluation value of the user's "love" index is "negative." Also, when the robot **20** speaks to the user as "Please charge me soon," if the user charges the robot **20** immediately, the feeling deduction unit **100** deduces that the evaluation value of the user's "love" index to "positive," whereas if the user does not charge immediately, the feeling deduction unit **100** deduces that the evaluation value of the user's "love" index to "negative." Furthermore, if the user strokes the head of the robot **20**, the feeling deduction unit **100** deduces that the evaluation value of the user's "love" index is "positive," whereas if the user kicks the robot **20**, the feeling deduction unit **100** deduces that the evaluation value of the user's "love" index to "negative."